

into the claims.

The objection to Claims 15 to 18 is traversed on the basis that the claims are, in fact, of proper form in describing products which are so formulated as to include the product produced by the process of the present invention as an essential ingredient. There is nothing improper about the language used in each of these claims to describe the product of each claim. Moreover, the amending language included in each of these claims is believed to improve upon the description of the subject matter of each. Claim 14 has been similarly amended. Entry of the amendments is respectfully requested.

As to the issue of Claim 1 regarding groups R and R," it does not follow that because R' is limited to methyl and ethyl, that such is also true of groups R and R." Groups R and R" are independently any desired alkyl group in the particular starting alkyltrichlorosilanes chosen. These groups are clearly and with precision presented in Claim 1. Accordingly, withdrawal of the issue is respectfully requested.

The issues raised with respect to lack of antecedent basis is believed obviated by the amending language incorporated in Claim 1. The indefinite article has been used.

As to the issue of "net-like," that is what the organoalkoxysiloxane product of the invention can look like. Thus, the term is not believed to be indefinite.

The language of Claim 12 in using the conjunction "and" in several places is not believed to be indefinite because a number of different types of materials is being described that are treatable with the organoalkoxysiloxane product of the invention. Thus, the materials are not alternative. Withdrawal of the objection is respectfully requested.

Prior Art Rejection

Claims 1-5, 7-10 and 15-18 stand rejected based on 35 USC 103(a) as obvious over

Fisher et al, U.S. Patent 4,506,087. This ground of rejection is respectfully traversed.

It is clear that the Fisher et al patent represents relevant prior art to the present invention because it discloses a continuous method of manufacturing oligomeric alkoxysilanes in which a chlorosilane starting material is reacted with alcohol and optionally water. While there are similarities between the process described in the patent and the present process as claimed, as noted by the Examiner, there is no teaching or suggestion in the patent of the reactant ratio limitation and the dwell time limitation of the present claims. This deficiency is significant because both are important in establishing a process by which the hydrolysis and condensation behavior of the chlorosilane starting material can be controlled so as to permit a continuous process of producing oligomeric alkoxysilane product in production scale quantities. The difficulties of accomplishing this objective are apparent from the discussion of relevant prior art in the description of the background in the application. On the other hand, in view of the fact that not only does Fisher et al teach that water, as a reactant, is optional in the process described therein, there is no teaching of a reaction system in which water is present in a specifically defined amount relative to the amount of chlorosilane and alcohol reactants. Moreover, the dwell time of the reactants in the first stage of the process of the invention is an important parameter, along with the ratio ranges of the present claims, in achieving the continuous process of the invention. Thus, the ratio and dwell time limitations of the present claims can not be just summarily dismissed as result effective variables. Rather, the limitations have only been realized as a consequence of careful investigation on the part of the inventors. Accordingly, the invention as claimed is believed patentably distinguished over Fisher et al and withdrawal of the rejection is respectfully requested.

Claims 11, 12 and 14 stand rejected based on 35 USC 103(a) as obvious over Fisher et al in view of Brennan et al, U.S. Patent 3,668,180. This ground of rejection is respectfully

traversed.

As is clear from the comments above regarding the Fisher et al patent, it is not believed that the patent suggests the present process of producing organoalkoxysilanes as claimed. Thus, it is believed that the product of Claim 10, which is the mixture of organoalkoxysilanes produced by the process of Claim 1, is not the same as that of Fisher et al. Accordingly, even though it is evident from the disclosure of Brennan et al that alkoxysilanes are known to be useful in the treatment of substrates such as concrete, nevertheless, since neither Fisher et al nor Brennan et al teaches the product of the present invention, it is therefore unobvious from the references to practice a method of treating organic or inorganic surfaces with an organoalkoxysilane product that is not taught or suggested by either patent. Moreover, because neither of the two patents teaches the present product of Claim 10, the coating or paint product of Claim 14 which uses the product of Claim 10 is unobvious in view of the prior art disclosures.

Claim 13 stands rejected based on 35 USC 103(a) as obvious over Fisher et al in view of Standke et al, U.S. Patent 5,679,147. This ground of rejection is respectfully traversed.

Applicants submit that because neither Fisher et al nor Standke et al teaches nor suggests the particular product prepared by the claimed process, the present claimed method of improving rheological properties of a dispersion or emulsion using the different organoalkoxysilane product of this invention is also unobvious over the cited and applied prior art. Accordingly, withdrawal of the rejection is respectfully requested.

It is now believed that the application is in proper condition for allowance Early notice to this effect is earnestly solicited.

Respectfully submitted,

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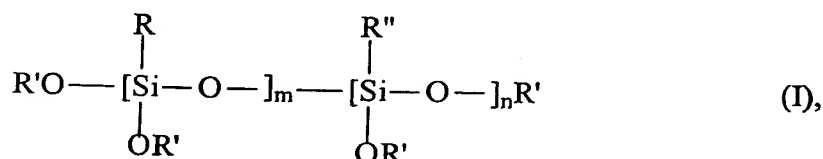
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MARKED-UP COPY OF AMENDMENT

IN THE CLAIMS

Please amend Claims 1 and 12-18 as follows:

--1. (Amended) A process for the continuous manufacture of a mixture of organosiloxanes of formula I



wherein R and R" are identical or different and are methyl, ethyl, vinyl, n-propyl, i-propyl, γ -chloropropyl, n-butyl, i-butyl, n-pentyl, i-pentyl, n-hexyl, i-hexyl, n-heptyl, i-heptyl, n-octyl, i-octyl, hexadecyl, octadecyl or alkoxy, R' represents methyl or ethyl, n and m are identical or different and each is 0 or an integer ranging from 1 to 20, on the condition that $(n+m) \geq 2$, comprising:

reacting in a first stage the constituents of (i) an organotrichlorosilane or a mixture of organotrichlorosilanes or a mixture of at least one organotrichlorosilane and tetrachlorosilane, (ii) water and (iii) alcohol, combined in a molar ratio (i) : (ii) : (iii) of 1 : (0.59 to 0.95) : (0.5 to 100), at a temperature of 0 to 150°C, which produces hydrogen chloride and a crude organoalkoxysiloxane as [a product] products which [is] are removed from the system [and];

proportionately transferring the crude organoalkoxysiloxane product [is transferred proportionately] to [the] a reaction distillation column of a subsequent second stage after an average dwell time of 0.5 to 180 minutes; and

conducting reaction and distillation in [the] said reaction distillation column [in a second

stage] in which volatile constituents are withdrawn from the top of the column and the organoalkoxysiloxane product is withdrawn as a bottom product, wherein the reaction-distillation column is operated at a bottom temperature of 50 to 200°C.

12. (Amended) The method as claimed in Claim 11, wherein the treatment is applied on inorganic surfaces, for water-, oil-, [dirt] dirt- and/or dye-repellency, for corrosion inhibition or for adhesion-promotion of metals, ceramics, artificial stones, glass, building materials, building components and buildings; for waterproofing and surface modification of textiles, leather, cellulose and starch products; for coating glass and mineral fibers or for surface modification of fillers.

13. (Amended) A method of improving the rheological properties of dispersions and emulsions, comprising:

incorporating the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim 10 in a dispersion or emulsion.

14. (Amended) A coating or paint formulation, comprising:

a paint or coating formulation containing the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim 10.

15. (Amended) A binding agent, comprising:

the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim 10 alone or as a component of a binding agent formulation.

16. (Amended) A release agent, comprising:

the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim 10 as a release agent.

17. (Amended) A adhesion promoter, comprising:

the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim

10 as an adhesion promoter.

18. (Amended) A cross-linking agent, comprising:

the mixture of linear, cyclic and/or net-like organoalkoxysiloxanes of formula (I) of Claim

10 as the cross-linking agent.--